

International Journal of Humanities Social Sciences and Education (IJHSSE)

Volume 2, Issue 2, February 2015, PP 123-134

ISSN 2349-0373 (Print) & ISSN 2349-0381 (Online)

www.arcjournals.org

Teachers' Teaching Experience and Academic Performance in Mathematics and English Language in Public Secondary Schools in Ogun State, Nigeria

Temitope Oluwakemi Ewetan., M.ED

Glorious Stars Model School

Ota, Ogun State, Nigeria

topkem21@yahoo.com

Olabanji Olukayode Ewetan., Ph.D

Department of Economics and Development Studies

College of Development Studies, Covenant University

Ota, Ogun State, Nigeria

olabanji.ewetan@covenantuniversity.edu.ng

Abstract: *This study investigated the influence of teachers' teaching experience on the academic performance of public secondary school students in Mathematics and English Language in Ado-Odo/Ota and Ifo Local Government Areas in Ogun State. The study adopted descriptive research design. Study population comprised all the 31 Senior Secondary Schools in the selected two local government areas. A sample of 20 Schools was drawn from the population through the process of simple random sampling technique, made up of 14 schools in Ado-Odo/Ota, and 6 schools in Ifo Local Government Areas. An inventory schedule was the instrument used for data collection. 400 questionnaires, 20 questionnaires per school were administered. 388 (97%) questionnaires were returned. Their responses were analyzed through content analysis. The regression analysis and t-test were used to test hypotheses generated for the study at 0.05 alpha levels. Findings reveal that teachers' teaching experience has significantly influenced students' academic performance in Mathematics and English Language as measured by their performance in the SSC examinations and as perceived by the respondents. Schools having more teachers with above 10 years teaching experience achieved better results than schools having more teachers with 10 years and below teaching experience.*

Keywords: *Teachers, Teaching, Experience, Academic Performance.*

1. INTRODUCTION

This study investigated teachers' teaching experience and academic performance in Mathematics and English Language in public secondary schools in Ado-Odo/Ota and Ifo Local Government Areas (LGAs) in Ogun State, Nigeria. Education is a continuous process in life. It is the process of training and developing the knowledge, skill, mind and character of people. It is also the process by which the latent abilities of individuals are developed so that they may be useful to themselves and the society (Olaniyonu, Adekoya and Gbenu, 2008). Meaningful improvements in the quality of education that students receive are determined by the quality of teachers (Anderson, 1991). Therefore quality teaching and learning are sine qua non for students' academic performance.

For a nation that wants to achieve rapid technological development, academic performance in Mathematics and English Language is central to the attainment of this laudable goal. Mathematics is the foundation science subject for the other science subjects like, Physics, Chemistry, Biology, and Additional Mathematics, while English Language is an indispensable tool of expression and communication. A number of scholars citing the role that language played in the successful development experience of nations like Japan, China, Korea, former Soviet Union now Common Wealth of Independent States, and the Asian Tigers, have advocated for the use of Nigerian local languages in teaching Mathematics and other science subjects in the primary and secondary schools. This recommendation was made to address the public concern on the poor academic

performance of students in Senior Secondary Certificate Examination (SSCE) in Mathematics and English Language in recent years. This recommendation has not been implemented till date and the poor academic performance in these two key subjects has persisted.

The controversy over the falling standards of education in Nigeria has been on the front burner of national discourse over the past decades and it is apparent that the debates will continue for some time to come. Poor academic performance has been linked to several factors which include high teacher-student ratio, shortage of good teaching staff, poor quality of educational leadership, political instability and politicization of educational programmes, automatic promotion, age of the learners, and inadequate essential physical facilities and equipment (Ewetan, 2010; Akinwunmi and Odunsi, 2008).

Information gathered through the National Bureau of Statistics shows that as at 2008, there were 14,829 secondary schools in Nigeria. Out of this number 2,930 secondary schools or 19.76% were from South West while 508 secondary schools or 17.34% were from Ogun State. One of the essential ingredients in developing good schools with high academic performance is regular supply of human and material resources. There are several states in Nigeria whose school teachers at the primary and secondary level are so unqualified that the percentage could be as high as eighty percent (Adesina 1986). Thus the high percentage of unqualified teachers in public secondary school is a major factor responsible for the poor students' academic performance. A major feature of this poor academic performance is the dismal performance in Mathematics and English Language in the Senior Secondary Certificate Examination (SSCE) in Nigeria in the recent years which has been linked to decline in the quality of teaching and learning (Ewetan, 2010; Akinsolu, 2010; Daso, 2013, Chhinh and Tabata, 2013). Better students' results are the main indicator of the experience and effectiveness of teachers. In developing and developed countries the teacher factor has been linked to low achievement in Mathematics and English Language (Akpo, 2012; TIMSS, 2002; Afrassa and Peeves, 1999; Jacob and Lefgen, undated).

Considering the foregoing, this study seeks to investigate the relationship between teacher variables such as years of experience, availability of experienced teachers, and students' academic performance in Mathematics and English Language in public secondary schools in Ado-Odo/Ota and Ifo Local Government Areas in Ogun State, Nigeria.

2. RESEARCH QUESTIONS

In addressing the research problem, this study seeks to provide answers to the following research questions;

- What is the status of teachers in terms of qualifications in the selected public secondary schools in Ado-Odo/Ota and Ifo Local Government Areas in Ogun State?
- How are teachers distributed on the basis of teaching experience in the selected public secondary schools in Ado-Odo/Ota and Ifo Local Government Areas in Ogun State?
- What is the level of students' academic performance in the selected public secondary schools in Ado-Odo/Ota and Ifo Local Government Areas in Ogun state?
- What is the relationship between teachers' years of experience and students' academic performance in the selected public secondary schools in Ado-Odo/Ota and Ifo Local Government Areas of Ogun State?
- What is the relationship between teachers' development programmes and students' academic performance in the selected public secondary schools in Ado-Odo/Ota and Ifo Local Government Areas of Ogun State

3. OBJECTIVES OF THE STUDY

The objectives of this study are:

- To find out the status of teachers in terms of qualifications in the selected public secondary schools in Ado-Odo/Ota and Ifo Local Government Areas of Ogun State
- To find out the distribution of teachers on the basis of teaching experience in the selected public secondary schools in Ado-Odo/Ota and Ifo Local Government Areas of Ogun State

- To find out the level of students' academic performance in the selected public secondary schools in Ado-Odo/Ota and Ifo Local Government Areas in Ogun state
- To examine the relationship between teachers' years of experience and students' academic performance in the selected public secondary schools in Ado-Odo/Ota and Ifo Local Government Areas of Ogun Stat
- To examine the relationship between teachers' development programmes and students' academic performance in the selected public secondary schools in Ado-Odo/Ota and Ifo Local Government Areas of Ogun State

4. LITERATURE REVIEW

The issue of teacher as a factor that affects students' academic performance has received a lot of attention in the literature and findings have been mixed and inconclusive. A strand of the literature revealed that a number of teacher variables which include years of teaching experience, level of educational attainment or academic qualifications, teacher development programmes, availability of qualified teachers, teacher-student ratio, teacher attitude, degree of job satisfaction, motivation and salary affect students' learning outcomes (Daso, 2013; Akpo, 2012; Odiri, 2011; Ewetan, 2010; Akinsolu, 2010; Adesoji and Olatunbosun, 2008; Bressoux et al, 2008; Adeyemi, 2008; Abu and Fabunmi, 2005). Another strand of the literature found that a number of teacher variables which include teacher years of experience, teacher academic attainment or qualifications, teacher-student ratio, and teacher development programmes had no significant influence on students' academic performance (Yara and Surumo, 2012; Ayodele and Ige, 2012; Zaku, 1983).

Akpo (2012) examined the impact of teacher-related variables on students' junior secondary certificate mathematics results in Namibia using questionnaire, multi-correlation and regression analysis and found that teacher educational qualifications, teaching experience, subject specialization, standards-based professional development, standard-based classroom activities, and classroom management beliefs are related to students' academic achievement in JSC Mathematics. Similar study by Daso (2013), on teacher variables and senior secondary students' achievement in Mathematics in Rivers State, Nigeria, reported that there is a significant relationship between teachers' method of teaching, teachers' attitude, teacher quality and students' achievement in Mathematics. Akinsolu (2010) investigated teachers and students' academic performance in Nigerian secondary schools and its implications for planning using questionnaire, Anova and Spearman Rank Correlation coefficient and found that teachers' qualifications, years of experience, and teacher-student ratio were significantly related to students' academic performance. In their study on "Student, Teacher and School Environment Factors as Determinant of Achievement in Senior Secondary School Chemistry in Oyo State, Nigeria, Adesoji and Olatunbosun (2008), adopted an ex-post facto research type and used four sets of instruments. They found that 7.2% of the total effect on achievement in chemistry was accounted for by all the seven predictor variables when taken together. It was also revealed that only four variables, school location, laboratory adequacy, teachers' attitude to chemistry teaching, and teachers' attendance at chemistry workshop had direct causal influence and significantly contributed to the prediction of achievement in chemistry. In a similar study of the relationship among teacher variables and adult learners' academic performance in the part-time sub-degree programme of the University of Ibadan in Nigeria, Abu and Fabunmi (2005) discovered that there is a significant and positive relationship between teacher's qualification, age, years of experience, teacher-learners ratio, and adult learners' academic performance.

Chhinh and Tabata (2003) in their study on the effects of selected teacher factors on the Mathematics achievement of urban primary school pupils in the state of Cambodia, used questionnaires and achievement test to construct an index of academic performance. The results of the stepwise regression analysis revealed that teachers' economic status, their years of teaching experience and job satisfaction have statistically significant relationships with the achievement of the pupils whose economic status had been held constant. However, these three teachers' variables explain only about 20 percent of the variance in the pupil learning achievement. In a similar study on the impact of different teacher and class characteristics on third graders'

outcomes in Germany, Bressoux et al (2008) found that teachers' training substantially improves students' test scores in Mathematics, and small class is more beneficial to low-achieving students within classes, and to all students in low achieving classes.

In a study of the relationship between teachers' effectiveness and students' academic performance in public secondary schools in Delta State, Nigeria, Akiri and Ugborugbo (2009) using correlation, simple regression, t-test, and single factor analysis of variance found that effective teachers produced better performing students. However the observed differences in students' performance were statistically not significant. Adu and Olatundun (2007) in a study on teachers perception of teaching as correlate of students' academic performance in Oyo State, Nigeria, found that, the relationship between teachers' perception and students' academic performance is positive and significant, and that qualification has no significant effect on students' performance.

Abuseyi (2001) examined student and teacher related variables as determinants of secondary school student academic achievement in Chemistry in Epe and Ibeju-Lekki Local Government Areas of Lagos State, Nigeria, using questionnaire, and adopted an ex-post facto design. He found that teacher age, teacher gender, qualifications, and experience had direct causal effect on students' achievement in Chemistry. Ayodele and Ige (2012) examined the relationship between utilisation of teachers and students' academic performance in senior secondary schools in Ondo State, Nigeria, using questionnaire, descriptive survey, and ex-post factor design. The results of the multiple regression analysis and t-test statistic revealed that the effective utilization of teachers rather than its mere availability impacts students' academic performance. Adeyemi (2008) examined teachers' teaching experience and students learning outcomes in the secondary schools in Ondo State, Nigeria, using questionnaire. The result of the chi-square test, correlation analysis, and t-test statistic revealed that teachers' teaching experience was significantly related to students' learning outcomes.

The literature reviewed above show clearly that teachers play a significant role in ensuring excellent academic standards measured by students' learning outcomes in both developed and developing countries. This study is another attempt to shed more light on the connection between teacher variables and students' academic performance within the context of education in a developing country.

5. DATA AND ANALYSIS

The study employed descriptive research design involving the use of a questionnaire, unstructured interviews and secondary data.

5.1. Sample and Sampling Technique

The study population comprised the thirty one (31) public secondary schools in the selected two local government areas (Ado-Odo/Ota and Ifo) of Ogun State. Simple random sampling technique was used to sample twenty (20) of the thirty-one (31) public secondary schools (65%) made up of fourteen (14) schools in Ado-Odo/Ota, and six (6) schools in Ifo Local government areas.

5.2. Instrumentation

The instrument used for study was a questionnaire titled "Teachers' Teaching Experience and Academic Performance" (TTEAP). It contains three sections. Section A contains demographic information about the respondents such as: name of school, local government area, age, sex, and marital status. Section B elicited responses to the following: academic qualifications, teachers' years of experience, teachers' development programmes, and classroom population. Section C elicited responses to the following: Does seminar/workshop participation contribute to teachers' teaching experience? Do teachers' years of teaching experience contribute to students' academic performance? Is there a strong relationship between availability of teachers with long years of teaching experience and academic performance? Do inexperienced teachers contribute to poor academic performance? Other relevant data such as each school's SSCE results analysis were obtained from the Ogun State Ministry of Education from 2005 to 2007. The reliability of the questionnaire was tested using Cronbach's Alpha coefficient. Cronbach's coefficient alpha of 0.82 was obtained (Ewetan, 2010). The results confirmed high reliability of the instrument.

5.3. Administration of Instrument/Training of Enumerators

For the questionnaire survey research, the actual field work was done in twenty (20) randomly selected schools in Ado-Odo/Ota and Ifo local government areas in Ogun State, Nigeria. The questionnaires were administered directly to the respondents by hand delivery between May and June 2010 by the researcher and with the aid of enumerators. Twenty (20) questionnaires per school were administered to twenty teachers in twenty randomly selected schools making a total of four hundred (400) questionnaires. Out of four hundred (400) questionnaires administered only 388 questionnaires (97%) were returned.

Data was analyzed using descriptive, inferential statistics, t-test statistic, Anova and regression analysis. Students' academic performance was examined in this study in terms of the performance level of students in the Senior Secondary Certificate Examination (SSCE) for the three-year (2004/2005 – 2006/2007) in Mathematics and English Language. The frequency counts of the number of students who obtained credit in English Language and Mathematics were regarded as successful students while those without credit in English Language and Mathematics were grouped as unsuccessful students. This separation was used because students applying for admission into higher education institutions must pass these two core subjects (English Language and Mathematics). All hypotheses were tested at the 0.05 significance level.

5.4. Research Hypotheses

- There is no significant relationship between teachers' years of experience and students' academic performance in Mathematics and English Language in the sampled public secondary schools.
- There is no significant difference in the students' academic performance in schools that have more teachers with above ten years of experience and schools that have teachers with less than ten years of experience in the sampled public secondary schools.

6. FINDINGS AND ANALYSIS

6.1. Research Question 1

What is the status of teachers in terms of qualification in the selected public secondary schools in Ado-Odo/Ota and Ifo Local Government Areas in Ogun State?

Table 1. *Teachers' Status by Qualifications in the Selected Public Secondary Schools in Ado-Odo/Ota and Ifo Local Government Areas in Ogun State*

	Frequency	Percent	Valid Percent	Cumulative Percent
NCE	74	19.1	19.1	19.1
HND	55	14.2	14.2	33.2
B.A	21	5.4	5.4	38.7
B.Sc	50	12.9	12.9	51.5
B.A. (ED)	48	12.4	12.4	63.9
B.Sc (ED)	80	20.6	20.6	84.5
M.ED	41	10.6	10.6	95.1
M.Sc	13	3.4	3.4	98.5
PhD	6	1.5	1.5	100.0
Total	388			

Source: *Field survey 2010*

Table 1 shows that of the 388 respondents, 48 (12.4%) hold B.A (ED), 80 (20.6%) hold B.Sc (ED), and 41 (10.6%) hold M.ED. These add up to 169 (43.6%) university graduates with specialty in education, while 90 (23.2%) are university graduates without specialty in education made up of 21 (5.4%) B.A (Bachelor of Art) holders, 50 (12.9%) B.Sc (Bachelor of Science) holders, 13 (3.4%) M.Sc (Masters of Science) holders, and 6 (1.5%) PhD (Doctor of Philosophy) holders. The table also reveals that 74 (19.1%) teachers hold NCE certificates while 55 (14.2%) are HND holders. On the whole teachers with specialty in education that is both university graduates and NCE holders are 243 (62.6%) while 145 (37.4%) are teachers without specialty in education.

6.2. Research Question 2

How are teachers distributed on the basis of teaching experience in the selected public secondary schools in Ado-Odo/Ota and Ifo Local Government Areas of Ogun State?

Table2. Teachers' Years of Experience in the Selected Public Secondary Schools in Ado-Odo/Ota and Ifo Local Government Areas of Ogun State

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 5years	124	32.0	32.0	32.0
	Between 5 - 10yrs	125	32.2	32.2	64.2
	Between 11 - 19yrs	96	24.7	24.7	88.9
	Above 20yrs	43	11.1	11.1	100.0
	Total	388	100.0	100.0	

Source: Field survey 2010

Table 2 shows that 124 teachers (32%) of the 388 sampled had below 5 years teaching experience. Another 125 teachers (32.2%) had between 5-10 years of teaching experience while 96 (24.7%) had between 11 to 19 years teaching experience. The remaining 43 teachers (11.1%) had above 20 years teaching experience. As such from the sample size of 388 a total of 139 teachers (35.8%) had above 10 years teaching experience while a total of 249 teachers (64.2%) had below 10 years teaching experience. This implies that the sample size is dominated by teachers with less than 10 years teaching experience.

6.3. Research Question 3

What is the level of students' academic performance in the selected public secondary schools in Ado-odo/Ota and Ifo Local Government Areas of Ogun State?

Students' academic performance was examined in this study in terms of the performance level of students in the Senior Secondary Certificate (SSC) examinations in Mathematics and English Language. In determining the level of students' academic performance in the schools, performance in the terminal examination (SSC examination) was computed. Thus, the frequency counts of the number of students who obtained grades 1-6 (credit grades) in English Language and Mathematics in the examinations were transformed from discrete data into continuous data through secondary analysis. This was used to determine the level of students' academic performance in the core subjects in the Senior Secondary Certificate (SSC) examinations. The grades obtained by students in the SSC examinations in English language and Mathematics was collected from the State Ministry of Education. Table 2 and Table 3 show the performance level of the students in the core subjects in the Senior Secondary Certificate (SSC) examinations.

Table3. Performance Level of Students in SSC Examinations in the 16 Selected Public Secondary Schools in Ado-Odo/Ota Local Government Area in Ogun State

Year	English Language (%)	Mathematics (%)	English Language and Mathematics (%)
2005	8.6%	26.0%	8.3%
2006	4.4%	7.2%	4.1%
2007	0.6%	0.8%	0.5%

Source: Ogun State Ministry of Education

Table4. Performance Level of Students in the SSC Examinations in the 4 Selected Public Secondary Schools in Ifo Local Government Area in Ogun State.

Year	English Language (%)	Mathematics (%)	English Language and Mathematics (%)
2005	2.5%	1.8%	1.5%
2006	2.6%	4.1%	3.9%
2007	1.5%	1.4%	1.2%

Source: State Ministry of Education

Table 3 above shows that the performance level of students in each of the two subjects, and in both subjects in the SSC examinations for the three years was low. This confirms the low level of students' academic performance in Mathematics and English Language in the selected public secondary schools in Ado-Odo/Ota Local Government Area.

Teachers' Teaching Experience and Academic Performance in Mathematics and English Language in Public Secondary Schools in Ogun State, Nigeria

Table 4 shows that the performance level of students in each of the two subjects, and in both subjects in the SSC examinations for the three years was low. This confirms the low level of students' academic performance in Mathematics and English Language in the selected public secondary schools in Ifo Local Government Area.

6.4. Research Question 4

What is the relationship between teachers' years of experience and students' academic performance in the selected senior secondary schools in Ado-Odo/Ota and Ifo Local Government Areas in Ogun State, Nigeria?

Table 5. Teachers' Years of Experience and Students' Academic Performance in the Selected Public Secondary Schools in Ado-Odo/Ota and Ifo LGAs in Ogun State.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	270	69.6	69.6	69.6
	Agree	112	28.9	28.9	98.5
	Strongly Disagree	4	1.0	1.0	99.5
	Disagree	2	.5	.5	100.0
	Total	388	100.0	100.0	

Source: Field survey 2010

Table 5 above shows that 270 (69.6%) of the 388 sampled strongly agree, and 112 (28.9%) of agree that experienced teachers in the various subjects could bring about better performance among students in secondary schools. While 4 (1%) of respondents strongly disagree, and 2 (0.5%) of respondents disagree that experienced teachers in the various subjects could bring about better performance among students in secondary schools. As such the analysis shows that experienced teachers in the various subjects could bring about better students' academic performance in senior secondary schools.

Table 6. Availability of Experienced Teachers and Students' Academic Performance in the Selected Public Secondary Schools in Ado-Odo/Ota and Ifo Local Government Areas in Ogun State.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	122	31.4	31.4	31.4
	Agree	216	55.7	55.7	87.3
	Strongly Disagree	17	4.4	4.4	91.5
	Disagree	22	8.5	8.5	100.0
	Total	388	100.0	100.0	

Source: Field survey 2010

Table 6 shows that 122 (31.4%) of the 388 sampled strongly agree, and 216 (55.7%) of respondents agree that there is a strong relationship between availability of teachers with long years of teaching experience and student academic performance. While 17 (4.4%) of respondents strongly disagree, and 33 (8.5%) of respondents disagree that there is a strong relationship between availability of teachers with long years of teaching experience and student academic performance. The analysis shows that availability of experienced teachers in the various subjects could bring about better students' academic performance in secondary schools.

6.5. Research Question 5

What is the relationship between teachers' development programmes and students' academic performance in the selected public secondary schools in Ado-Odo/Ota and Ifo Local Government Areas in Ogun State?

Table 7. Teachers' Development Programmes and Students' Academic Performance in the Selected Public Secondary Schools in Ado-Odo/Ota and Ifo Local Government Areas in Ogun State.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	176	45.4	45.4	45.4
	Agree	201	51.8	51.8	97.2
	Strongly Disagree	3	.8	.8	97.9
	Disagree	8	2.1	2.1	100.0
	Total	388	100.0	100.0	

Source: *Field survey 2010*

Table 7 shows that 176 (45.4%) of the 388 respondents strongly agree, and 201 (51.8%) of the respondents agree that teachers' development programmes contribute to students' academic performance. While 3 (0.8%) of the respondents strongly disagree, and 8 (2.1%) of the respondents disagree that teachers' development programmes contribute to students' academic performance. As such the analysis shows that teachers' development programmes contribute to students' academic performance.

6.6. Testing of Hypotheses

Hypothesis 1: There is no significant relationship between teachers' years of experience and students' academic performance in public secondary schools in Ogun State.

Table8. *Summary of Regression Analysis on Relationship between Teachers' Teaching Experience and Students' Academic Performance*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.698 ^a	.461	.497	.56195
a. Predictors: (Constant), Experienced teacher in the various subjects could bring about better performance				

Table9. *ANOVA^b*

Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	5.012	1	5.012	15.870	.000 ^a
	Residual	121.896	386	.316		
	Total	126.907	387			
a. Predictors: (Constant), Experienced teacher in the various subjects could bring about better performance						
b. Dependent Variable: Students' Academic Performance						

Table 8 and Table 9 above reveal that a significant relationship exists between teachers' years of experience and students' academic performance in English Language and Mathematics SSC examinations in Ado-Odo/Ota and Ifo Local Government Areas in Ogun State (F (1, 386) =15.870; P<0.05). The finding confirms that teachers' years of experience influenced students' academic performance in English Language and Mathematics SSC examinations as perceived by the respondents. In essence, the predicted variable of teachers' years of experience accounts for 46.1% of the total variance in students' academic performance in English Language and Mathematics SSC examinations (R square = 0.461). This percentage is high and statistically significant. Teachers' years of experience are an important predictor of students' academic performance in Mathematics and English Language in the sampled public secondary schools in Ogun State, therefore the null hypothesis is rejected.

Hypothesis 2

There is no significant difference in the students' academic performance in schools that have more teachers with above ten years of experience and schools that have more teachers with ten years and less than ten years of experience in Ogun State public secondary schools.

Table10. *t-test Analysis of Scores for year 2005*

Subject	Schools having teachers with years of teaching experience	N	Mean	SD	df	Calculated-t	Table-t
English	>10 years	139	0.43	0.41	386	5.52	1.96
	<10 years	249	0.21	0.20			
Mathematics	>10 years	139	0.40	0.41	386	6.38	1.96
	<10 years	249	0.20	0.21			

p<0.05

Teachers' Teaching Experience and Academic Performance in Mathematics and English Language in Public Secondary Schools in Ogun State, Nigeria

Table11. *t*-test Analysis of Scores for year 2006

Subject	Schools having teachers with years of teaching experience	N	Mean	SD	df	Calculated-t	Table-t
English	>10 years	139	0.44	0.43	386	5.81	1.96
	<10 years	249	0.23	0.22			
Mathematics	>10 years	139	0.41	0.39	3.86	6.27	1.96
	<10 years	249	0.21	0.20			

$p < 0.05$

Table12. *t*-test Analysis of Scores for year 2007

Subject	Schools having teachers with years of teaching experience	N	Mean	SD	df	Calculated-t	Table-t
English	>10 years	139	0.42	0.41	386	6.14	1.96
	<10 years	249	0.24	0.23			
Mathematics	>10 years	139	0.40	0.39	386	6.56	1.96
	<10 years	249	0.22	0.21			

$p < 0.05$

Testing this hypothesis, data on the SSC results in English Language and Mathematics for years 2005-2007 were used. The schools were classified into two groups. Since it is norm in the State school system that teachers who spent above ten years in the teaching profession are classified as experienced teachers (Ogun State Ministry of Education 2007), the first group consisted of schools having more teachers with above ten years teaching experience while the second group contained schools having more teachers with ten years and less than ten years teaching experience. The results are indicated in Tables 10, 11 and 12. As indicated in Tables 10, 11 and 12, the calculated t-value was greater than the table t-value in each subject in each of the years. The probability 'p' was less than 0.05 in all the subjects. This indicates a significant difference in the achievement of students between schools having more teachers with above ten years teaching experience and schools having more teachers with ten years and less than ten years teaching experience in the subjects in each of the years. Schools having more teachers with above 10 years teaching experience achieved better results than schools having teachers with 10 years and less than ten years teaching experience. The mean scores were higher in schools having more teachers with above ten years teaching experience than in school having more teachers with 10 years and less than years of teaching experience. Therefore the null hypothesis is rejected.

7. DISCUSSION ON FINDINGS

The study investigated the relationship between teacher variables and students' academic performance in Mathematics and English Language in public secondary schools in Ado-Odo/Ota and Ifo Local Government Areas in Ogun State. The findings reveal that majority of the teachers in these sampled schools at the time of the study are teachers with specialty in education. However the teaching personnel in the selected public secondary schools in Ado-Odo/Ota and Ifo LGAs is not yet in accordance with the ESA report of 2005 that requires that a majority of Nigerian secondary school teachers hold bachelors and master's degree holders (See Table 1).

On the issue of teachers' years of experience in the selected public secondary schools in Ado-Odo/Ota and Ifo LGAs in Ogun State, the results show that teacher's years of experience is a measure of quality and thus becomes imperative in the achievement of students' academic performance. This supports those who advocate that experienced teachers need to be retained in schools if higher productivity is to be achieved because learners achieve more from these teachers.

Tables 3 and 4 show low level of students' academic performance in Mathematics and English Language in the sampled schools in Ado-Odo/Ota and Ifo LGAs in Ogun State. This finding agrees with Akinsolu (2010) who reported poor student's academic performance in West African Senior School certificate Examinations (WASSCE).

Tables 5 and 6 reports the responses of the respondents in the sampled schools and show that experienced teachers and their availability could bring about better students' academic performance in the selected public secondary schools.

Tables 7 confirms that there is a link between teachers' development programme, teachers' teaching experience and students' academic performance as over 90% of the respondents strongly agree/agree that teachers' development programme such as seminars and workshops will improve teachers' teaching experience, and ultimately students' academic performance.

The results of the regression analysis in Table 8 and the Anova test in Table 9 reveal that there is a significant relationship between teachers' years of experience and students' academic performance in English Language and Mathematics. In Table 8 the predicted variable of teachers' experience accounts for 46.1% of the total variance in students' academic performance in English Language and Mathematics ($R^2 = 0.461$), also Table 9 shows a significant relationship between predicted variables of teachers' experience and students' academic performance in English Language and Mathematics ($F = 15.870$, $P < 0.05$) therefore the null hypothesis is rejected. This finding confirms Akinsolu (2010), Adeyemi (2008), Chhinh and Tabata (2003), Abu and Fabunmi (2005) who found that teachers' teaching experience correlated significantly and positively with students' academic performance. The finding is however in contrast with the findings made by Zaku (1983) who found in the former Gongola State, Nigeria that teaching experience had a non-significant standardized partial regression of (-0.06) and it made little contribution to the explained variance.

Tables 10, 11 and 12 reveal that there is a significant difference in students' academic performance in schools that have more teachers with above ten years of experience and schools that have more teachers with ten years and less than ten years of experience in public secondary schools in Ado-Odo/Ota and Ifo LGAs in Ogun State. The results in Tables 10, 11, and 12 show that the calculated t value is greater than the table in English Language and Mathematics in each of the years from 2005 to 2007, hence the rejection of the null hypothesis. The finding agrees with Sweeney (1989) and Jones (1987) who found that students tend to achieve better results when taught by teachers with more years of teaching experience. However the finding disagrees with Dewalt (1986) which reported no significant difference between teachers with teaching experience and teachers without teaching experience in relation to learning outcomes. The finding also disagrees with Schneider (1988) who found no statistical difference between novice and experienced teachers in relation to students' achievement.

8. CONCLUSION AND RECOMMENDATIONS

The finding of this study established that teachers' years of experience significantly influenced students' academic performance in the selected public secondary school in Ado-Odo/Ota and Ifo Local Government Areas in Ogun State, Nigeria. Also differences in teachers' years of experience had significant impact on fostering persistence and improvement in academic performance in secondary school education. The findings of this study revealed that there is an urgent need for government to address the poor students' academic performance in English Language and Mathematics in public secondary schools in Ogun State. Based on the findings of this study the following recommendations are made to improve the academic performance of students.

To foster improved academic performance of secondary school students, government should give priority to the employment of professional and qualified teachers and ensure that such teachers are retained to enable them acquire experience on the job. The perennial failure recorded in English Language and Mathematics SSCE examinations should urgently be addressed through the organization of workshops and seminars for teachers especially towards pedagogical training.

There is the need for government to motivate teachers to boost their productivity by providing them with necessary incentives such as adequate salaries, excellent work environment and other fringe benefits that compare favorably with what their counterparts in other professions receives. Additionally all the non-professional teachers should be encourage to acquire relevant diplomas and degrees in education to make them eligible for registration with the Teachers Registration Council (TCR). Finally to maintain professional competence and teaching quality standards the

issues of training and retraining of teachers at all levels of education should be given priority in the scheme of things by all the stakeholders in the business of education in Nigeria.

REFERENCES

- Abu, P.B., & Fabunmi, M. (2005). The relationship among teacher variables and adult learners' academic performance. *International Journal of African American Studies*, IV (1), 12-20.
- Abuseji, F.A. (2001). Students and teacher related variables as determinants of secondary school Students academic achievement in chemistry. *Jurnal Pendidikan*, 32, 3-18.
- Adesina, S. (1986). *Changing phenomenon in the Nigerian Educational System: New perspective in Nigerian Education*. Ibadan: Vintage Publishers Ltd.
- Adesoji, F.A., & Olatunbosun, S.M. (2008). Student, teacher and school environment factors as determinants of achievement in senior secondary school chemistry in Oyo State, Nigeria. *The Journal of International Social Research*, 1/2, 13-34.
- Adeyemi, T. O. (2008). Teachers' teaching experience and students' learning outcomes in Secondary schools in Ondo State, Nigeria. *Asian Journal of Information Technology*, 7(5), 201-209.
- Adu, E.O., & Olatundun, S.O. (2007). Teachers' perception of teaching as correlates of students' academic performance in Oyo State, Nigeria. *Essays in Education*, 20, 57-64.
- Afrassa, T.H., & Peeves, J. P. (1999). Student level factors that influence mathematics Achievement of Austrian students: A path analysis with comparism over time. Paper Presented at arrival conference of AARE Mellusine, 27.
- Akinsolu, A.O. (2010). Teachers and students' academic performance in Nigerian secondary Schools: Implications for planning. *Florida Journal of Educational Administration and Policy*, 3(2), 86-103.
- Akinwunmi, F.S. and A.O Odunsi. (2008). Impact of environmental management on students' quality output in Nigerian secondary schools. *Journal of International Social Research*, 1(5): 752-762.
- Akiri, A. A., & Ugborugbo, N. M. (2009). Teachers' effectiveness and students' academic performance in public secondary schools in Delta State, Nigeria. *Stud HommCommSci*, 3(2), 107-113.
- Akpo, S.E. (2012). The impact of teacher-related variables on students' junior secondary Certificate mathematics results in Namibia, Ph.D Thesis, University of South Africa, School of Education.
- Al-Methen, A.E. (1983). *Teacher performance characteristics and pupils' outcomes within science classrooms in Kuwait High Schools*. Ph.D Thesis, University of Hull.
- Anderson, K. et al (1991). *School governors*. London; Longman Group.
- Ayodele, J.B., & Ige, M.A. (2012). Teachers' utilization as correlate of students' academic performance in senior secondary schools in Ondo State, Nigeria. *European Journal of Educational Studies*, 4(2), 281-287.
- Bressoux, P., Kramarz, F., & Prost, C. (2008). Teachers' training, class size and students' Outcomes: Learning from administrative forecasting mistakes. Institute for the study of Labour, Discussion paper No. 3871.
- Chhinh, S., & Tabata, Y. (2003). Teacher factors and mathematics achievement of Cambodian Urban primary school pupils. *Journal of International Development and Cooperation*, 9(2), 29-41.
- Daso, P.O. (2013). Teacher variables and senior secondary students' achievement in Mathematics in Rivers State, Nigeria. *European Scientific Journal*, 9 (10), 271-289.
- Dewalt, M. W. (1986). The effects of teacher training on teacher experience. Unpublished Ph.D Thesis, University of Virginia USA. Dissertation Abstracts on CD Rom Order No. ACC 8716973
- Ewetan, O. O. (2010). Influence of teachers' teaching experience and school facilities on the academic performance of senior secondary school students in Ado-Odo/Ota and Ifo Local Government Areas of Ogun State. M.ED Research Project, Lagos State University, Department of Educational Management.

- Jones, J. J. (1997). Trained and untrained secondary school teachers in Barbados: Is there a difference in classroom performance? *Edu.Res.*, 39(2), 182.
- Kwari, Y. (1989). The relationship between selected educational variables and students' academic achievement in Secondary Schools in Sokoto State, Nigeria. Unpublished Ph.D Thesis, Wayne State University USA. Dissertation Abstracts on CD Rom Order No AAC 8922763
- Mullens, J.E. (1993). The relationship between teacher qualification and students' learning: A study of standard one classrooms in Belize, Central America. EDD Thesis, Harvard University.
- National Bureau of Statistics, (2008).Directory of secondary schools in Nigeria. www.nigerianstat.gov.ng.
- Odiri, O.E. (2011). The influence of teachers' attitude on students' learning of Mathematics in Nigerian secondary schools. *Journal of Research in Education*, 2(1), 15-21.
- Ogun State Ministry of Education, Science and Technology (2007). Educational Statistics, Abeokuta Statistics Section, pp: 1-54.
- Ogunsola, J.T. (2003). Assessment of teachers' personality and teaching Outcomes in Nigerian Schools.M.Ed Project, University of Lagos, Department of Educational Administration and Management.
- Olaniyonu, S.O.A. et al (2008). Fundamentals of educational planning. Mushin, Lagos: MICODEX Nigeria Ltd.
- Schneider, K. A. (1988). Teaching experience as a determinant of middle level teacher concerns. Unpublished Ph.D Thesis, Ball State University USA. Dissertation Abstracts On CD Rom Order No. ACC 8825970
- Sweeney, I. D. (1989). A study of some factors that are related to mathematical achievement in Mississippi high schools as measured by scores on the American College Test, Unpublished Ph.D Thesis.The University of Mississippi USA. Dissertation Abstracts on CD Rom Order No. AAC 9005402
- TIMSS (2002). Third international mathematics and science study. Australia and USA.
- Yara, P.O. (2009). Relationship between teachers' attitude and students' academic achievement in Mathematics in some selected senior secondary schools in southwestern Nigeria. *European Journal of Social Sciences*, 11(3): 364-369.
- Yara, P.O., &Surumo, T.N. (2012). Performance indicators of secondary school mathematics in Nyimira south district of Kenya. *British Journal of Arts and Social Sciences*, 8(2), 230-240.
- Zaku, A.B.D. (1983). The relationship between some school factors and students' performance in chemistry in the Gongola State of Nigeria. Ph.D Thesis, University of Hull.

AUTHORS' BIOGRAPHY



Temitope Oluwakemi Ewetan is the Proprietress of Glorious Stars Model School in Ota, Nigeria.



Dr. Olabanji Ewetan, A lecturer in Covenant University with specialization in Public Sector Economics